



3004-9US

IPW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Brian O. Bachmann et al.

Examiner: Unassigned

Serial No.: 10/760,493

Group Art Unit: Unassigned

Filed: January 21, 2004

For:

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(b)(1)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicant submits, pursuant to 37 C.F.R. §§ 1.97 and 1.98, a form PTO-A820 with the sixty-one (65) references listed thereon, copies of which are submitted herewith. It is respectfully requested that, the examiner consider and cite of record these references. Applicant would appreciate the examiner initialing and returning the Form PTO-A820 indicating the information has been considered and made of record.

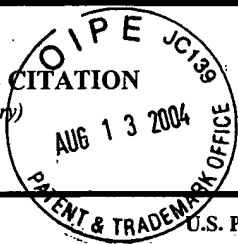
This Information Disclosure Statement is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

Respectfully submitted,

Ywe J. Looper  
Reg. No. 43,758

Dated: August 12, 2004  
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**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)



Docket Number (Optional) 3004-9US	Application Number USSN 10/760,493
Applicant(s) Bachmann, Brian O.	
Filing Date January 21, 2004	Group Art Unit

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	US 4,452,775	06.05.84	Syntex (USA) Inc.	A61K	9/26	
	A2	US 5,039,660	08.13.91	Endocon Inc.	C07K	17/08	
	A3	US 3,854,480	12.17.74	Alza Corporation	A61M	5/00	
	A4	US 6,361,974	03.26.02	Diversa Corporation	C12P	21/06	
	A5	US 6,372,497	04.16.02	Maxygen Inc.	C12N	15/00	
	A6	US 4,946,778	08.07.90	Genex Corporation	C12N	15/00	

**FOREIGN PATENT DOCUMENTS**

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
	B1	WO 01/34816	05.17.01	WO	C12N	15/76		
	B2	WO 03/062458	07.31.03	WO	C12Q	1/02		
	B3	CA 2,352,451	07.24.01	CA	C12Q	1/68		

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

C1	Sakuda et al., Tetrahedron Letters, (1995) vol.36, no.16, pp.2777-2780 "Linearmycin A, a novel linear polyene antibiotic"
C2	Sakuda et al., J Chem. Soc. Perk. Trans., (1996) 1, pp.2315-2319 "Novel linear polyene antibiotics: linearmycins"

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C3	Pawlack et al., Journal of Antibiotics, (1980) vol.33 no.9, pp.989-997 "The structure of lienomycin, a pentaene macrolide antitumor antibiotic"
C4	Berge SM et al., Journal of Pharmaceutical Sciences, (1977) vol.66 no.1, pp.1-19 "Pharmaceutical Salts"
C5	Goodfellow, Bergey's manuel of systematic bacteriology, vol.4, pp.2322-2339 "Suprageneric classification of actinomycetes"
C6	Embley et al., Annu. Rev. Microbiol., (1994) vol.48, pp.257-289 "The molecular phylogeny and systematics of the actinomycetes"
C7	Shah, J. Antibiotics (Tokyo), (2000) vol.53, no.5, pp.502-508 "Cloning, characterization and heterologous expression of a polyketide synthase and P-450 oxidase involved in the biosynthesis of the antibiotic oleandomycin"
C8	Rangaswamy et al., Proc. Natl. Acad. Sci. USA, (1998) vol.95, pp.15469-15474 "Biosynthesis of the Pseudomonas polyketide coronafacic acid requires monofunctional and multifunctional polyketide synthase protiens"
C9	Kakavas et al., J Bacteriol., (1997) vol.179, no.23, pp.7515-7522 "Free in PMC Identification and characterization of the niddamycin polyketide synthase genes from Streptomyces caelestis."
C10	Brautaset et al., Chem. Biol., (2000) vol.7, no.6, pp.395-403 "Biosynthesis of the polyene antifungal antibiotic nystatin in Streptomyces noursei ATCC 11455: analysis of the gene cluster and deduction of the biosynthetic pathway"
C11	Fisher et al., Structure Fold Des., (2000) vol.8, no.4, pp.339-347 "The X-ray structure of Brassica napus beta-keto acyl carrier protein reductase and its implications for substrate binding and catalysis"
C12	Stryer, Biochemistry 3rd edition, (1998) W.H. Freeman and Co., New York, pp.752-754
C13	Altschul et al., J. Mol. Biol., (1990) vol.215, no.3, pp.403-410 "Basic local alignment search tool"
C14	Hopwood, Chem. Rev., (1997) vol.97, no.7, pp.2465-2497 "Genetic Contributions to Understanding Polyketide Synthases"

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C15	McDaniel et al., Proc. Natl. Acad. Sci. USA, (1999) vol.96, pp.18646-18651 Multiple genetic modifications of the erythromycin polyketide synthase to produce a library of novel "unnatural" natural products.
C16	Reid et al., Biochemistry, (2003) vol.42, no.1, pp.72-79 "Abstract A model of structure and catalysis for ketoreductase domains in modular polyketide synthases"
C17	Oppermann, Udo CT et al., Biochemistry, (1997) vol.36(1), pp.34-40 "Active site directed mutagenesis of 3/17-hydroxysteroid dehydrogenase establishes differential effects on short-chain dehydrogenase/reductase reactions"
C18	Zoller et al., Methods in Enzymol, (1983) vol.100, p.468-500 "Oligonucleotide-directed mutagenesis of DNA fragments cloned into M13 vectors"
C19	Dalbie-McFarland G et al., Proc. Natl. Acad. Sci. USA (1982) vol.79, no.21, pp. 6409-13 "Oligonucleotide-directed mutagenesis as a general and powerful method for studies of protein function"
C20	Oliynyk et al., Chem. Biol., (1996) vol.3 no.10, pp.833-839 "A hybrid modular polyketide synthase obtained by domain swapping"
C21	Hans et al., J. Am. Chem. Soc., (2003) vol.125 no.18, pp.5366-74 "Mechanistic analysis of acyl transferase domain exchange in polyketide synthase modules"
C22	Kao et al., Science, (1994) vol.265(5171), pp.509-512 "Abstract Engineered biosynthesis of a complete macrolactone in a heterologous host"
C23	Oh, SH; Chater KF, Journal of Bacteriology, (1997) vol.179, no.1, pp.122-127 "Denaturation of circular or linear DNA facilitates targeted integrative transformation of Streptomyces coelicolor A3(2): possible relevance to other organisms"
C24	Arrowsmith et al., Mol. Gen. Genet., (1992) vol.234, no.2, pp.254-264 "Characterisation of actI-homologous DNA encoding polyketide synthase genes from the monensin producer Streptomyces cinnamonensis"
C25	Paradkar et al., Appl. Environ. Microbiol., (2001) vol.67, no.5, pp.2292-2297 "Applications of gene replacement technology to Streptomyces clavuligerus strain development for clavulanic acid production"
C26	Blanco et al., Mol. Gen. Genet., (2000) vol.262, no.6, pp.991-1000 "Characterization of two glycosyltransferases involved in early glycosylation steps during biosynthesis of the antitumor polyketide mithramycin by Streptomyces argillaceus"

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C27	Chen et al., Gene, (2001) vol.263, no.1-2, pp.255-64 "The Strptomycetes venezuelae pikA V gene contains a transcription unit essential for expression of enzymes involved in glycosylation of narbonolide and 10-deoxymethynolide"
C28	Schaffner CP, Mavrolide Antibiotics: Chemistry, biology and practice, S. Omura, ed. Academic Press (1984) p.491-92 "Polyene microlides in clinical practice"
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C30	Carrillo H et al., SIAM J. Applied Math., (1988) vol.48, no.5, pp.1073-1082 "The multiple sequence alignment problem in biology"
C31	Gluzman Y, Cell, (1981) vol.23, no.1, pp.175-82 "SV40-transformed simian cells support the replication of early SV40 mutants"
C32	Leung DW et al., Technique, (1989) vol.1, pp.11-15 "A method for random mutagenesis of a defined DNA segment using a modified polymerase chain reaction"
C33	Caldwell RC et al., PCR Methods Applic., (1992) vol.2, pp.28-33 "Randomization of genes by PCR mutagenesis"
C34	Reidharr-Olson, JF et al., Science, (1988) vol.241 (4861), pp.53-57 "Combinatorial cassette mutagenesis as a probe of the informational content of protein sequences"
C35	Kholer et al., Nature, (1975) vol.256, pp.495-497 "Continuous cultures of fused cells secreting antibody of predefined specificity"
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C37	Cole et al., Monoclonal Antibodies and Cancer Therapy, Alan R. Liss Inc., (1985) pp.77-96 "The EBV-hybridoma technique and its application to human lung cancer"
C38	Wood T., Methods in Enzymology, (1988) vol.160, pp.87-116 "Methods for measuring Cellulase Activities"

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C40	Zazopoulos et al., Nature Biotechnology, (2003) vol.21, pp.187-190 "A genomics-guided approach for discovering and expressing cryptic metabolic pathways"
C41	Grote R., Zeeck A., J. Antibiot., (1988) vol.41, pp.1178-95 "Colabomycin A from Streptomyces griseoflavus Tue 2880"
C42	Osada et al., J. Antibiot., (1991) vol.44, pp.1463-6 "Enopeptin-A from Streptomyces griseus"
C43	He H et al., J. Antibiot., (2000) vol.53, no.2, pp.191-195 "Isolation and structural elucidation of AC326-alpha, a new member of the moenomycin group"
C44	Wong GK et al., J Antibiotics, (1998) vol.51, no.5, pp.487-491 "Antifungal activities of rapamycin and its derivatives, prolyrapamycin, 32-desmethylrapamycin, and 32-desmethoxyrapamycin"
C45	Arikan S et al., Antimicrobial Agents and Chemotherapy, (2003) vol.47, no.8, pp.2640-2643 "Comparison of two methods and three end points in determination of in vitro activity of micafungin against Aspergillus spp."
C46	Dubois N et al., Microbiology, (1998) vol.144, pp.2299-2310 "Antifungal activities of rapamycin and its derivatives, prolyrapamycin, 32-desmethylrapamycin, and 32-desmethoxyrapamycin"
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C48	Pagliano FM, Arch Sci Med (Torino), (1979) vol.136, pp.303-308 "Correction of hyperdyslipidemia using polyene-structure substances. Controlled clinical trial"
C49	Barbaro A. et al., Archivio per Scienze Mediche, (1980) vol.137, pp.211-216 "Action of a polyene macrolide on hyperdislipidaemic disorders"
C50	Singhal AK et al, Lipids, (1981) vol.16, p.423-426 "C.P. Effect of candidacin on cholesterol and bile acid metabolism in the rat"

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C51	Staprans I et al., Arteriosclerosis, Thrombosis and Vascular Biology, (1998) vol.18, pp.977-983 "Oxidized cholesterol in the diet accelerates the development of aortic atherosclerosis in cholesterol-fed rabbits"
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C53	Chen S. et al, Chemistry & Biology, (2003) vol.10, pp.1065-1076 "Organizational and mutational analysis of a complete FR-008/Candididin gene cluster encoding a structurally related polyene complex"
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C55	Worthen, D.R. et al., Drug Development and Industrial Pharmacy, (2001) vol.27, no.4, pp.277-286 "Methods for the recovery and purification of polyene antifungals"
C56	Staunton, J., Weissman, K.J., Nat. Prod. Rep., (2001) vol.18, pp.380-416 "Polyene biosynthesis: a millennium review"

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